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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,351	03/07/2001	Calvin D. Ostler	5038.1 P	4906

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EXAMINER

WILSON, JOHN J

ART UNIT

PAPER NUMBER

3732

DATE MAILED: 08/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/801,351

Applicant(s)

OSTLER ET AL.

Examiner

John J. Wilson

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-102 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-56 is/are allowed.
- 6) ☒ Claim(s) 57, 59-73, 75-87 and 89-102 is/are rejected.
- 7) ☒ Claim(s) 58, 74 and 88 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 57, 64, 66, 69, 70, 72, 73, 82, 83, 85-87, 94, 96, 99 and 100 are rejected under 35 U.S.C. 102(e) as being anticipated by Cao (6331111). Cao shows a first substrate 702 and Fig. 7, cups 702a and Fig. 9, LEDs 701b and Fig. 9, electric wiring 704a and 704b, heat sink 402b, Fig. 4b and Fig. 12 (1203 and 1222) and control circuitry, Figs 1a and 1b. As to claim 64, see reflective coating at column 9, lines 42-44. As to claim 70, see multiple wavelengths at column 1, lines 29-34. As to claim 86, see lens 1407.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 59, 60, 67, 68, 75, 76, 80, 81, 89, 90, 97 and 98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cao (6331111) in view of Kennedy

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(5420768). Cao shows the structure as described above, however, does not show a metal (aluminum) heat sink. Kennedy teaches forming heat sinks from metal, and specifically from aluminum, column 2, line 33. It would be obvious to one of ordinary skill in the art to modify Cao to include the use of aluminum to form the heat sink as shown by Kennedy in order to efficiently move the heat.

Claims 61-63, 65, 77-99, 91-93, 95 and 102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cao (6331111). Cao shows the structure as described above. The type of environment that the structure is to be used with is an obvious matter of choice in the intended use of the shown structure and in known ways of dissipating heat to one of ordinary skill in the art. As to claim 65, the use of silver for a reflective coating is well known and would have been an obvious matter of choice to the skilled artisan in the use of well known materials for a well known result. As to claim 102, the use of glass or plastic for a lens is well known and would have been an obvious matter of choice to the skilled artisan in the use of well known materials for a well known result.

Claims 71, 84 and 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cao (6331111) in view of Kennedy (5233283). Cao shows the structure as described above, however, does not show the specified wavelengths. Kennedy shows using wavelengths from 400 to 500 nanometers, column 1, lines 15-21.

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It would be obvious to one of ordinary skill in the art to modify Cao to include the wavelengths shown by Kennedy in order to cure the desired materials.

Allowable Subject Matter

Claims 58, 74 and 88 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not teach the use of diamond in the substrate.

Claims 1-56 are allowed. The prior art does not teach the use of a heat pipe in combination with the other elements.

Drawings

The drawings filed March 7, 2001 have been found to be acceptable by the examiner.

Specification

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

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Claim Objections

Claim 1 9s objected to because of the following informalities: In line 13, "pip" should be – pipe – and "on location" should be – one location –. Appropriate correction is required.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McDermott (463798) shows cups, Fig. 2. Murata (4935665) and Ignatius (5660461) show arrays of cups. Conte (5268812) shows heat pipes. Kovac et al (6200134) shows a heat sink 46.

Any inquiry concerning this communication should be directed to John Wilson at telephone number (703) 308-2699.



**John J. Wilson
Primary Examiner
Art Unit 3732**

jjw

August 16, 2002

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Work Schedule: Monday through Friday, Flex Time